

Amendments to the Claims under Revised 37 C.F.R. § 1.121

Claim 1 (currently amended): An isolated nucleic acid molecule comprising:

- (a) the nucleotide sequence as set forth in any of SEQ ID NO: 1, SEQ ID NO: 3, or SEQ ID NO: 5;
- (b) a nucleotide sequence encoding a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6; or
- (c) a nucleotide sequence that is complementary to the nucleotide sequence of either (a) or (b).

Claim 2 (currently amended): An isolated nucleic acid molecule comprising:

- (a) a region of the nucleotide sequence of any of SEQ ID NO: 1, SEQ ID NO: 3, or SEQ ID NO: 5 encoding a polypeptide fragment of at least about 25 amino acid residues, ~~wherein the polypeptide fragment has an activity of a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6, or is antigenic;~~
- (b) a region of the nucleotide sequence of any of SEQ ID NO: 1, SEQ ID NO: 3, or SEQ ID NO: 5, ~~or the nucleotide sequence of (a);~~ comprising a fragment of at least about 16 nucleotides; or
- (c) a nucleotide sequence that is complementary to the nucleotide sequence of either (a) or (b).

Claim 3 (currently amended): An isolated nucleic acid molecule comprising:

- (a) a nucleotide sequence encoding a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6 ~~with~~ having at least one conservative amino acid substitution, wherein the ~~encoded~~ polypeptide ~~has an activity of a~~ having at least one conservative amino acid substitution is at least about 70 percent identical to the polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6;
- ~~(b) — a nucleotide sequence encoding a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6 with at least one amino acid insertion, wherein the encoded polypeptide has an activity of a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or~~

SEQ ID NO: 6;

~~(e)~~ a nucleotide sequence encoding a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6 with at least one amino acid deletion, wherein the encoded polypeptide has an activity of a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6;

~~(d)~~(b) a nucleotide sequence encoding a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6 ~~which has~~ having a C- and/or N- terminal truncation, wherein the ~~encoded polypeptide has an activity of a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6~~ having a C- and/or N- terminal truncation comprises at least about 25 amino acid residues;

~~(e)~~(c) a nucleotide sequence encoding a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6 ~~with~~ having at least one modification that is a conservative amino acid substitution, ~~an amino acid insertion, an amino acid deletion, C-terminal truncation, or N-terminal truncation~~, wherein the ~~encoded polypeptide has an activity of a~~ having at least one modification is at least about 70 percent identical to the polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6 and comprises at least about 25 amino acid residues;

~~(f)~~(d) a nucleotide sequence of any of (a) - ~~(e)~~(c) comprising a fragment of at least about 16 nucleotides; or

~~(g)~~(e) a nucleotide sequence that is complementary to the nucleotide sequence of any of (a) - ~~(f)~~(d).

Claim 4 (previously presented): A vector comprising the nucleic acid molecule of any of Claims 1, 2, or 3.

Claim 5 (original): A host cell comprising the vector of Claim 4.

Claim 6 (original): The host cell of Claim 5 that is a eukaryotic cell.

Claim 7 (original): The host cell of Claim 5 that is a prokaryotic cell.

Claim 8 (currently amended): A process of producing a ~~B7-like~~ polypeptide encoded by the nucleic acid molecule of any of Claims 1, 2, or 3, comprising culturing the host cell of Claim 5 under suitable conditions to express the polypeptide, and optionally isolating the polypeptide from the culture.

Claim 9 (cancelled).

Claim 10 (currently amended): The process of Claim 8, wherein the nucleic acid molecule comprises promoter DNA other than the promoter DNA for the native ~~B7-like polypeptide gene~~ operatively linked to the ~~DNA encoding the B7-like polypeptide~~ nucleic acid molecule.

Claim 11 (currently amended): The isolated nucleic acid molecule according to Claim ~~[[2]]~~3, wherein the percent identity is determined using a computer program that is GAP, BLASTN, FASTA, BLASTA, BLASTX, BestFit, or the Smith-Waterman algorithm.

Claim 12-47 (cancelled).

Claim 48 (previously presented): A viral vector comprising the nucleic acid molecule of any of Claims 1, 2, or 3.

Claim 49-56 (cancelled).

Claim 57 (previously presented): The nucleic acid molecule of any of Claims 1, 2, or 3 attached to a solid support.

Claim 58 (previously presented): An array of nucleic acid molecules comprising at least one nucleic acid molecule of any of Claims 1, 2, or 3.

Claim 59 (currently amended) An isolated nucleic acid molecule comprising:

(a) a nucleotide sequence encoding a polypeptide comprising the amino acid sequence as set forth in SEQ ID NO: 2;[[:]]

~~Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa~~
~~Xaa Xaa Ile Glu Gly Pro Gln Asn Xaa Xaa Val Leu Lys Xaa Ser Xaa Ala Xaa Phe~~
~~Asn Cys Thr Val Xaa Xaa Gly Trp Lys Leu Xaa Met Trp Xaa Leu Xaa Xaa Met Val~~
~~Val Leu Ser Xaa Xaa Xaa Xaa Xaa Pro Ile Ile Thr Asn Xaa Arg Phe Thr Xaa Xaa~~
~~Xaa Tyr Xaa Xaa Xaa Xaa Xaa Phe Xaa Ser Glu Xaa Ile Ile His Xaa Val Xaa Pro Ser~~
~~Asp Ser Gly Xaa Xaa Xaa Cys Ser Leu Gln Asn Ser Xaa Xaa Xaa Gly Ser Ala Xaa~~
~~Leu Xaa Val Gln Val Met Gly Xaa Leu Xaa Ile Pro Ser Xaa Asn Leu Xaa Val Xaa~~
~~Glu Xaa Glu Pro Cys Xaa Val Thr Cys Xaa Xaa Xaa Xaa Trp Thr Xaa Leu Pro Asp~~
~~Ile Ser Trp Glu Leu Xaa Xaa Xaa Val Ser His Ser Ser Tyr Xaa Xaa Xaa Xaa Glu Pro~~
~~Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ser Xaa Leu Xaa Leu Thr Pro Xaa Xaa Asn Gly Thr~~
~~Leu Thr Cys Val Ala Xaa Xaa Lys Xaa Leu Xaa Ala Xaa Lys Ser Xaa Thr Val Asn~~
~~Leu Thr Val Xaa Xaa Xaa Pro Xaa Asp Xaa Xaa Gly Xaa Xaa Xaa Xaa Xaa Xaa~~
~~Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Xaa Xaa Leu Pro Thr Trp Xaa Xaa Xaa Xaa Leu~~
~~Xaa Xaa Ala Xaa Xaa Xaa Leu Leu Xaa Xaa Xaa Xaa Xaa Leu Xaa Ile Xaa Xaa Cys~~
~~Cys Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa~~
~~Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ile Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Lys~~
~~Xaa Xaa Xaa Glu Thr Xaa Xaa Xaa Ser Gly Xaa Glu Asn Xaa Gly Tyr Xaa Ser Asp~~
~~Glu Xaa Lys Xaa Xaa Xaa Thr Ala Ser Leu Pro Pro Lys Ser Xaa Glu Xaa Ser Xaa~~
~~Pro Glu Xaa Arg Xaa Ser Xaa Xaa Xaa Xaa Pro Xaa Gln Xaa Xaa Xaa Xaa Xaa Xaa~~
~~Pro Xaa Pro Ala Xaa His Pro Xaa Xaa Ser Phe Xaa Leu Ala Ser Pro Xaa Lys Val~~
~~Xaa Asn Xaa Thr Xaa Val,~~

wherein the residue at positions 19, 34, 93, and 378 is either glutamic acid or glutamine;
the residue at positions 20, 100, 131, 181, 214, and 246 is either isoleucine or valine;
the residue at positions 36, 108, and 360 is either arginine or histidine;
the residue at positions 42, 116, 220, 253, and 366 is either serine or threonine;
the residue position 43 is either glutamine or histidine;
the residue at positions 48 and 374 is either isoleucine or leucine;
the residue at positions 51, 133, 305, 327, and 328 is either alanine or threonine;

~~the residue at positions 60, 159, 179, 250, and 385 is either valine or leucine;~~
~~the residue at positions 101, 215, 295, and 369 is either arginine or glutamine;~~
~~the residue at position 114 is either tyrosine or phenylalanine;~~
~~the residue at position 135 is either asparagine or glycine;~~
~~the residue at positions 202, 345, and 359 is either lysine or glutamine;~~
~~the residue at position 239 is either serine or alanine;~~
~~the residue at position 254 is either methionine or leucine;~~
~~the residue at positions 280 and 338 is either cysteine or alanine;~~
~~the residue at positions 5 18, 27, 28, 32, 53, 54, 61 64, 70, 74 76, 78 82, 84, 87, 91, 99, 109,~~
~~110, 122, 124, 127, 139, 143 146, 149, 158, 160, 167 170, 173 178, 183, 187, 188, 197, 198, 200,~~
~~204, 207, 216, 218, 221, 235, 236, 238, 244, 245, 247, 249, 252, 257 261, 263, 265, 266, 281 293,~~
~~296 303, 306, 307, 310 312, 315, 318, 321, 325, 329, 340, 342, 347, 351, 352, 354, 356 358, 361,~~
~~363, 370, 373, 381, and 383 may be is any naturally occurring amino acid; and~~
~~the residue positions 1 4, 223 234, 270 278, 349, and 350 may be any naturally occurring~~
~~amino acid or may be absent; or~~
wherein the glutamic acid residue at any of positions 15, 89, or 374 may be substituted
with a glutamine residue;
the valine residue at any of positions 16, 127, or 242 may be substituted with an
isoleucine residue;
the glutamine residue at position 30 may be substituted with a glutamic acid residue;
the arginine residue at any of positions 32, 104, or 356 may be substituted with a
histidine residue;
the serine residue at either position 38 or 362 may be substituted with a threonine
residue;
the glutamine residue at position 39 may be substituted with a histidine residue;
the isoleucine residue at position 44 may be substituted with a leucine residue;
the alanine residue at either position 47 or 129 may be substituted with a threonine
residue;
the valine residue at any of positions 56, 175, or 381 may be substituted with a leucine
residue;

the methionine residue at either position 83 or 250 may be substituted with a leucine residue;

the isoleucine residue at any of positions 96, 177, or 210 may be substituted with a valine residue;

the arginine residue at either position 97 or 211 may be substituted with a glutamine residue;

the tyrosine residue at position 110 may be substituted with a phenylalanine residue;

the threonine residue at any of positions 112, 216, or 249 may be substituted with a serine residue;

the asparagine residue at position 131 may be substituted with a glycine residue;

the leucine residue at either position 155 or 246 may be substituted with a valine residue;

the lysine residue at position 198 may be substituted with a glutamine residue;

the serine residue at position 235 may be substituted with an alanine residue;

the cysteine residue at either position 276 or 340 may be substituted with an alanine residue;

the glutamine residue at either position 291 or 365 may be substituted with an arginine residue;

the threonine residue at any of positions 301, 323, or 324 may be substituted with an alanine residue;

the aspartic acid residue at position 325 may be substituted with a glutamic acid residue;

the glutamine residue at either position 341 or 355 may be substituted with a lysine residue; or

the leucine residue at position 370 may be substituted with an isoleucine residue; or

(b) a nucleotide sequence that is complementary to the nucleotide sequence of (a).